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THE UNIVERSITY OF ALBERTA

AN ANALYSIS OF OFFICE ACTIVITIES

USING NOBELS' TAXONOMY

BY



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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF EDUCATION

DEPARTMENT OF INDUSTRIAL AND VOCATIONAL EDUCATION

EDMONTON, ALBERTA

SPRING, 1970

Thesis
1970
104

University of Alberta

Faculty of Graduate Studies

The undersigned certify that they have read and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "An Analysis of Office Activities Using NOBELS' Taxonomy" submitted by Anne Barbara Pura in partial fulfilment of the requirements for the degree of Master of Education.

Abstract

The purpose of the study was to determine the relative amounts of time which recent business education graduates spent performing various business and office activities.

A questionnaire based upon the list of action verbs from the NOBELS' (1968) A Taxonomy of Office Activities for Business and Office Education was used to survey thirty random-selected beginning office workers and their respective supervisors regarding employee duties.

The questionnaire contained the list of twenty primary-division verbs of the Operating, Interacting, and Managing Domains, and their corresponding twenty groups of secondary-division verbs from the Taxonomy. The verbs were termed activities for the study.

Respondents scored each activity in the primary group and secondary groups, one group at a time, on a five-point scale, to indicate relative amounts of time spent on the various activities.

Scale values were calculated for each activity for employee and supervisor responses. Standard scores were calculated and correlations were computed for the group of primary activities and for each group of secondary activities.

Activities in the Operating Domain on which employees spent the most time, in rank order from most to least, were Recording--copy, write, duplicate, register, post, transcribe; Arranging--sort, and compile; Verifying--proofread,

and check; Transmitting--forward, deliver, dispatch, distribute, and route; Manipulating--stamp, feed, numbering, and punch; Storing--file; Indexing--label, cross-reference, and code; Collecting--search, gather, and order; Composing--edit, document, and outline; Comparing--match; Modifying--correct, revise, and perfect; Calculating--total, count, and compute; and Purging--weed.

Activities in the Interacting Domain were Communicating--consult, listen, thank, answer, explain, and discuss; Assisting--aid, welcome, show, inform, alert, and orient; and Coping--cooperate and obey.

Activities occupying the most time in the Managing Domain were Actuating--perform; Planning--classify, and analyze; Organizing--systematize; and Controlling--regulate.

While the ranking of the primary activities differed in some respects according to employee and supervisor responses, there was a high correlation between the standard scores for the group of primary activities and for each of their corresponding groups of secondary activities.

Acknowledgments

The author is grateful indeed for having had the privilege of carrying forward her work under the guidance of Associate Professor J. E. Gallagher.

Acknowledgment with gratitude is also extended to Professor M. W. Petruk for the continual assistance and encouragement which he provided throughout the planning and development of this thesis.

Appreciation is also extended for the constructive suggestions which were received from Dr. M. A. Clark during the initial stages of this project and from Professor S. Ubelacker during the final stage of the thesis.

Grateful appreciation is expressed to Dr. E. J. Ingram for his valuable suggestions during the initial and final stages of this endeavor.

Without the wholehearted cooperation of the employees and the supervisors who participated, the study would not have been possible. A very special acknowledgment is hereby made to the respondents for their unselfish efforts on my behalf.

A sincere word of appreciation is added for the assistance provided by Miss Nellie O'Brien, of Sir Austin O'Brien High School.

Acknowledgment and sincere thanks are extended to the typists, Mrs. Lynda Unick and Mrs. Isabel Bince.

It is impossible to estimate the sacrifices which were

made by our children, David, Barbara, and Vernon, during the months of research. For their considerations on my behalf, for their generosity in taking on extra duties, and for their continual encouragement and support, I am humbly appreciative.

Finally, the understanding and encouragement, as well as the advice and suggestions from Bill, my husband and co-worker in the area of vocational education, are acknowledged with thanks and gratitude. His tireless efforts to better the educational offerings to students have been a constant inspiration to me throughout this endeavor, as they have been throughout my career in the teaching profession.

Table of Contents

Chapter		Page
1	Introduction and Discussion of the Problem . . .	1
	Statement of the Problem	3
	Significance of the Problem	3
	Methodology	3
	Collection of data	3
	Definitions of Terms	4
	Primary Activities	4
	Secondary Activities	4
	Employees	4
	Supervisors	4
	Population and Sample	5
	Treatment of the Data	5
	Assumptions	5
	Limitations of the Study	6
	Introduction to the Text	6
2	Review of Related Literature	8
	Summary	17
3	Methodology	19
	Taxonomy of Office Activities	19
	Developmental Procedures	19
	Structure of the Taxonomy	20
	Taxonomy Definitions	21
	Population and Sample	23
	The School Setting	23

Chapter	Page
Population	23
Sample	23
The Instrument	24
The Procedure	25
4 Presentation of Data	27
Profile of Employees	27
Comparison of Employee and Supervisor Responses	30
Primary Activities	30
Secondary Activities	31
Analysis of Employee Activities	40
Operating Domain	40
Interacting Domain	44
Managing Domain	45
5 Summary, Conclusion, and Implications	49
Summary of Findings and Conclusions	49
Operating Domain	50
Interacting Domain	51
Managing Domain	52
Implications for Education	53
Recommendations for Further Research	54
References	56
Appendix A	60
Personal Data Form for Employees	61
Appendix B	62
Letter to Supervisors	63

Chapter	Page
Appendix C	64
Guide Sheet	65
Appendix D	66
Questionnaire	67
Appendix E	75
Definitions of Activities	76

List of Tables

Table		Page
1	Gross Monthly Salaries of Employees	28
2	Mean Standard Scores of Three Domains Employee and Supervisor Responses	31
3	Rank, Standard Score, and Correlation Employee and Supervisor Responses Primary and Secondary Activities	33

List of Figures

Figure		Page
1	Employee Jobs	29
2	Three Domains of Primary Activities	
	Standard Scores for Employee and Supervisor	
	Responses	32
3	Employee Responses	
	Primary and Secondary Activities	47
4	Supervisor Responses	
	Primary and Secondary Activities	48

Chapter 1

Introduction and Discussion of the Problem

Many young people enter the labor market without any formal education beyond a high school diploma. According to the current Occupational Outlook Handbook of the United States Department of Labor (1968-69, p. 245):

The clerical occupation field is a major source of employment for young people. . . . More than half of all girls who go to work after completing high school find jobs in the clerical and related occupations. . . . For all but the most routine clerical positions, the minimum educational requirement is usually graduation from high school. . . . Employment in clerical occupations is expected to rise. . . . Employee turnover is especially high among clerical workers.

Educational leaders are in general agreement that business courses and programs should be offered at the secondary level to facilitate job placement and to contribute to the general education of the student. Conant, in The Comprehensive School (1967, p. 62) states:

To my mind, it is desirable for as many boys and girls in the high school as possible to have an ultimate vocational goal. It may well be that many of them will change their minds before the high school course is over or in later years. But if a student thinks that what he or she is studying in school is likely to have significance in later life, the study in question takes on a new importance. There is less tendency for such "committed" students to waste their time or have a negative attitude toward their schoolwork.

Business educators, as well, agree that vocational education has a vital role to play in developing in each youth a degree of saleable skills which he needs for entering

the world of work.

In a poll conducted by Wanous (1968, p. 52), it was found that eighty-eight per cent of leaders in the business education field agreed that "the primary objective of business education should be job preparation or a combination of job preparation and general education."

Cook and Brown (1968, p. 2) suggest that what should and should not be taught in the high school cannot be determined in isolation from the real day-to-day world. They contend that vocational education is faced with the challenge of improving existing programs and of developing entirely new ones that will prepare people for gainful employment. Among the questions they pose are:

- 1 What improvements are needed in existing programs?
- 2 What new programs are needed?

They propose that these questions can be answered adequately by obtaining reliable and valid data to aid in decision-making.

The responsibility for preparing these young people for initial entry jobs is placed upon secondary school educators. The Senior High School Handbook of the Department of Education, Province of Alberta (1969, p. 6), describes one of the general objectives of secondary education as follows:

The school must help each Alberta youth to develop those understandings and attitudes that will make him an intelligent and productive participant in economic life, and assist him to develop saleable skills, or prepare

him for post-school vocational training.

Statement of the Problem

The purpose of the study was to determine the relative amounts of time which recent business education graduates spent performing various business and office activities.

Significance of the Problem

Educating for the business world requires that curriculum builders and educators be aware of current office practices--of the kinds of activities which beginning office workers are expected to perform.

The study attempted to discover what is expected of beginning office workers through an analysis of the operating, interacting, and managing activities in which recent graduates were involved.

Students elect courses which they feel will fill their needs and interests, apart from the fact that these students are preparing to fill the needs of business and industry. It is hoped that the results of the study may contribute some useful data for areas such as curriculum and counselling.

Methodology

Collection of Data

The instrument used to collect data for the study contained the list of action verbs from NOBELS' (1968) A Taxonomy of Office Activities for Business and Office

Education. The questionnaire contained a list of the twenty primary-division verbs and their corresponding twenty groups of secondary-division verbs from the Taxonomy. The verbs were referred to as activities in the study. The respondents, business education graduates and their immediate supervisors, indicated on a five-point scale the relative amounts of time spent on each of the primary activities and on each of the activities within secondary groups.

Definition of Terms

Primary activities. Throughout the study, primary activities refer to the primary-division verbs from NOBELS' Taxonomy. The Taxonomy classifies business and office activities into three domains of twenty major groups. Thirteen primary-division verbs make up the Operating Domain, three primary-division verbs are contained within the Interacting Domain, and four primary-division verbs represent the Managing Domain.

Secondary activities. For the purposes of the study, secondary activities refer to the secondary-division verbs from NOBELS' Taxonomy. These verbs are descriptive of twenty primary-division verbs and indicate distinctive ways in which the action of the respective primary-division verb might be carried out.

Employees. The sample of secondary school graduates who participated in the study were referred to as employees.

Supervisors. The immediate supervisors of the sample of secondary school graduates were referred to as supervisors

throughout the study.

Population and Sample

The population for the study was limited to seventy-three of the ninety-five business education graduates of June, 1967, and June, 1968, from St. Joseph Composite High School, Edmonton, Alberta, and their immediate supervisors.

The graduates were those who had completed the senior office procedures option, Office Practice 30, and who were employed in office-type jobs.

A random sample of thirty graduates and their immediate supervisors participated in the study.

Treatment of the Data

Scale values (Torgerson, 1958, p. 71) were computed for each activity for each group of respondents.* The scale values were converted to standard scores which were used to compare the responses of the employees and their supervisors regarding the relative amounts of time spent on the primary activities and on the activities within each of the secondary groups.

Assumptions

It was assumed that office activities of recent graduates would be similar to office activities of graduates to be

*The mean of the weighted responses on a five-point scale yielded a scale value for each activity for each group of respondents.

placed. It was further assumed that students enrolled in the office procedures option in their high school programs were preparing themselves for office positions.

Limitations of the Study

The limitations of this investigation include the following considerations:

The employee sample was drawn from one comprehensive high school which enrolled more than one thousand students. The sample of employees held jobs in a large city at the time of the survey. Data relating to the sample of immediate supervisors was not requested.

The validity of the verbs in the Operating Domain was evaluated by Jones (1969, p. 56) for billing operations. She found "that the primary-division verbs of the Operating Domain do represent logical breakdowns of office tasks and that the secondary and related verbs are in general, adequate to describe a task."

The reliability of the instrument was dependent upon the interpretations which the respondents made regarding the instructions and the definitions of activities.

Introduction to the Text

Chapter 2 contains a brief review of studies related to the activities of beginning office workers.

Chapter 3 describes the Taxonomy upon which the study was based, the population and sample, the instrument, and

the procedures followed.

Chapter 4 presents a profile of the employees who participated in the study and an analysis of the accumulated data regarding business and office activities.

Chapter 5 presents the summary, conclusions, and recommendations.

Chapter 2

Review of Related Literature

Vocational education plays a vital role in developing the saleable skills which secondary school graduates require in order to enter the world of work. This chapter presents a survey of those investigations concerned with the activities of beginning office employees.

An extensive study, conducted by Charters and Whitley (1924), while not limited to beginning office workers, is included here.

Charters and Whitley defined their problem in the following terms: First, to determine the duties performed by the secretary to businessmen and administrators; second, to determine the qualities which are conspicuously present in successful secretaries and conspicuously absent in unsuccessful secretaries. They found that the median number of duties performed by an individual was about 130, and that there were 87 duties, the frequency of which was quite uniform in all occupational offices. In a frequency listing of 871 duties, forty-one of the first fifty involved typewriting. The frequency listing of forty-five traits ranked the first ten as accuracy, responsibility, dependability, intelligence, courtesy, initiative, judgment, tact, personal pleasantness, and personal appearance.

Jones (1937, p. 89) compiled a list of skills and

knowledge demanded by business. The items are ranked in order of the frequency with which they were used on employment tests by business firms. The specific jobs which required these skills were not listed. The frequency listing of the first twenty skills and knowledges were:

- (a) Arithmetic skill
- (b) General intelligence
- (c) Alphabetizing
- (d) English fundamentals
- (e) Ability to follow directions
- (f) Typewriting skill
- (g) Ability to spell
- (h) General business information
- (i) General information
- (j) Reasoning ability
- (k) Elementary bookkeeping
- (l) Vocabulary or word ability
- (m) Social intelligence
- (n) Shorthand skill
- (o) Copying figures
- (p) Judgment--making comparisons
- (q) Attention to small details
- (r) Correct punctuation
- (s) Memory of oral directions
- (t) Letter writing

In a St. Louis survey, Hannebrink, (1941, p. 23) reporting on the employment of office machine operators, found that typewriters were used more than any other item of equipment. Other machines ranked in the following order: dictating and transcribing units, adding, calculating, book-keeping, and duplicating machines.

Potter (1944, p. 29) studied five New York firms to determine what clerical workers did and how their working time was distributed. Typing and filing ranked first in importance. She noted that in machine calculation, more time was devoted to addition than to all other operations combined.

Reed (1956, p. 223) examined information that would

enable business students, business teachers, school administrators, and businessmen in Oklahoma City to understand better the circumstances surrounding the employment of beginning office workers. Data were derived from the opinions of 233 office managers who supervised the work activities of 8,546 office workers employed in 54 different kinds of business enterprises. Conclusions were:

- (a) relatively few opportunities existed for the individual who had not finished high school;
- (b) beginning employees generally encountered difficulty in initiating, organizing, and executing efficiently the office tasks assigned to them;
- (c) beginning typists and stenographers were frequently deficient in the ability to perform efficiently the tasks which are basic to their occupational classifications;
- (d) accuracy was the single personal trait in which beginning office workers were most frequently deficient;
- (e) office employees performed a wide variety of specific duties which frequently extended well beyond the descriptions of the duties for which they were initially employed;
- (f) the greatest difficulty was obtaining qualified workers for secretarial and accounting positions; and
- (g) almost all office employees were required to utilize one or more office machines in addition to the typewriter. (Reed, 1956, p. 223)

A study similar to that of Reed's was conducted by Weeks, (1962, p. 75) in the Syracuse Metropolitan Area. His investigation involved surveying 234 business firms that employed 5,681 employees in 14 beginning office classifications. He found that, because of turnover and increased demand, employment opportunities appeared excellent. A basic

qualification for employment was high school graduation. Of the characteristics and traits studied, integrity was of first importance. Regarding knowledges, skills, and abilities, the ability to follow directions ranked first. Machines most frequently used, other than typewriters, were adding and calculating machines. Weeks also found that a majority of businessmen felt that skill training should be provided by secondary schools.

Berry (1964, p. 338) conducted a study concerning the training for general office assignments. She found that four areas of office activities were common to all general office jobs. These were: communicating orally, filing, recording and verifying, and typewriting. The requirement for initial employment was high school graduation. With the exception of machine transcribing and the operation of the key punch machine and the typewriter, the office executives, in general, indicated that all activities within the areas of general office assignments may be learned wholly during employment. Berry concluded that by building the ability to assimilate and use effectively the knowledges, skills, and abilities previously learned; by teaching the principles, practices, and procedures of business organization and office management; and by teaching the fundamental concepts of data processing and those technical aspects which reveal the functions of automated equipment, the office practice course could be justified on the secondary school level.

Braden (1964, p. 206) investigated the effects of high

school vocational training upon subsequent beginning career patterns. He found that there was a statistically significant difference in the labor-market behavior after graduation of 126 graduates when divided into four groups according to the number of vocational office courses taken in high school. Those with more vocational office training felt prepared for work, obtained high-level entering and ending jobs, and were identified as having experienced stable beginning career patterns. They were able to avoid dead-end and unstable beginning career patterns characteristic of the graduates with less vocational office training.

An analysis of beginning jobs of business education high school graduates was the basis of a study made by the members of the Alpha Lambda Chapter of Delta Pi Epsilon of Michigan State University, chaired by Cloyd (1964, p. 66). Job classifications, variety of typewriting assignments, shorthand usage, variety of office machines used, kinds of bookkeeping operations performed, and office clerical tasks were tabulated with relative frequencies. The use of the typewriter and office machines, and clerical office tasks appeared as predominant duties for these beginning workers. In addition to the typewriter, the adding machine was the most frequently used office machine. Telephone usage and mail handling appeared as frequent office duties. Many bookkeeping operations were performed by office clerks.

Noodel (1967, p. 164) studied the adequacy of high school office practice instruction. Results of the Nebraska

survey of businessmen indicated a need for an office practice course to include preparation in a wide variety of office machines, up-to-date training in office procedures and systems instruction in automation, and emphasis in the area of human relations. Businessmen also wanted employees who had mastered the basic skills and who were competent as typists. Very few offered any formal on-the-job training of employees and most expected the secondary schools to continue to strengthen their programs.

Pender (1967, p. 209) investigated the administrative and professional responsibilities of secondary school secretarial program graduates in relation to size and type of employing company. He found that greater responsibilities and more complex duties were assigned to employees in smaller companies and in the professional organizations. Based on the results of this investigation, the following items of course content were recommended for inclusion in the secondary school secretarial curriculum: a high degree of emphasis on speed building in typewriting; a large number of exercises typewriting numbers; extensive practice in composing at the typewriter; a course or course sequence in Human Relations or planned integration of human relations principles throughout the entire secretarial curriculum; special emphasis on the operation of the adding machine and photocopy machines; and a course in Office Etiquette to assist the student in developing ease and finesse in dealing with customers personally and in telephone conversations.

A study by Malsbary (1968, p. 401) of beginning office workers identified a number of knowledges, skills, and understandings through the application of the factor analysis technique. Among the 27 factors were: typewriting, bank services, filing, computations, customer accounting, telephone, and business language. Malsbary found that within the five office job family categories (bookkeeping and computational, clerical, machine operation, customer contact, and stenographic and secretarial), there were certain skills, knowledges, and understandings, that appeared to be dominant in all job families. Three of these were: (a) how to write numbers legibly; (b) how to spell correctly; and (c) how to do basic arithmetic. He also found that the top three tasks of beginning office workers, when weighted by frequency and time spent doing the tasks, were: (a) completing blank forms, (b) filing, and (c) typing letters and reports from rough drafts. Two personal characteristics cited by the beginning office workers as being important to success on the job were: (a) accuracy in work, and (b) a sense of responsibility. Malsbary found that the main strengths of beginning office workers, as seen by their supervisors, were the following: (a) general typing ability; (b) ability to operate office machines; (c) ability to interact with people, (d) speed of learning; (e) pleasing personality; (f) general knowledge of business terms and concepts; and (g) general knowledge of mathematics.

Lovern, (1968, p. 30) investigated the factors

affecting the employment of beginning office workers in Atlanta, Georgia. Three questionnaires were used to determine employment factors with reference to job opportunities and education requirements; employment procedures and practices; general knowledges, skills, and abilities; characteristics and traits; promotional opportunities; proficiencies and deficiencies noted among beginning workers; and duties most frequently performed. The three groups surveyed were office managers, beginning workers, and experienced workers. In twenty-one job classifications, demand for office workers was expected to remain the same for all classifications except typists (juniors), stenographers (juniors), key punch operators, and general clerks (senior), where the demand was expected to increase. "Follow directions" and "concentrate on work" were two knowledges considered essential for beginning workers. Deficiency was noted among beginning workers in these knowledges: (a) concentrate on work, (b) spell accurately, and (c) follow directions.

Recent research studies involved three new approaches in providing subject matter for vocational business and office education. (Bangs, 1968, p. 397)

The first approach concerned a research project conducted by Fred Cook, Wayne State University, Detroit, Michigan, and funded by the U.S. Office of Education. The project was designed to update the Charters and Whitley study. The approach was to get at what is required of a secretary by studying the duties, responsibilities, and

characteristics as they are perceived by three different groups--the secretary's peers, the immediate supervisors, and by the secretary herself. Significant findings were:

- (a) Most successful secretaries had only one year of shorthand;
- (b) Those secretaries who had one year or less of high school typewriting were as successful as those who had as much as three years;
- (c) Typing speed and accuracy was not a significant factor in the success of the secretaries;
- (d) Those who had taken bookkeeping in high school were no more successful than those who had not taken it;
- (e) There was no relationship between success and the training received in office machines;
- (f) There was a negative relationship between typing speed and secretarial success;
- (g) There was no significant relationship between job satisfaction and secretarial success;
- (h) Married secretaries were more successful than unmarried secretaries;
- (i) Neither social class nor ethnic background had a significant effect on secretarial success. (Cook & Lanham, 1968, p. 5)

The second approach concerned educating for a computerized world. This study was conducted by Hellestad and Bangs, and concerns the implications of data processing for educational institutions. Some ideas which emerged from the information collected were: employees in data processing for business do not need an extensive background in mathematics, and employees in data processing for business must understand systems.

A third new approach in providing subject matter for vocational business and office education was a project under

the investigation of Frank Lanham, University of Michigan, Ann Arbor, entitled NOBELS (New Office and Business Education Learnings System). Phase I involved a feasibility study aimed at determining the practicability of developing, through a systems-oriented learning procedure, a new business and office education curriculum. An important basic step has been the development, directed by Huffman, of NOBELS' (1968, 163 pages) A Taxonomy of Office Activities for Business and Office Education.

In October, 1968, the U.S. Office of Education announced the funding of NOBELS, Phase II. The purpose is to develop a comprehensive and timely set of performance goals for business and office education which can be endorsed by the profession.

Summary

The literature which was reviewed centered mainly on the activities of beginning office workers. Some of the studies included findings on prerequisites for office jobs, and traits, as well as on skills and knowledges.

Graduation from secondary school and the ability to type were generally the minimum prerequisites for office employment. All of the studies indicated, though, that office workers are expected to perform a wide variety of tasks, including the operation of other machines than the typewriter. It was noted that beginning office workers lacked the ability to initiate, organize, and execute

efficiently the tasks which were assigned to them.

The need for accuracy was stressed in several studies. Accurate written communications and arithmetic calculations were mentioned specifically.

Filing activities and other clerical office tasks appeared as frequent duties in all offices. Employees were expected to understand general business terms and concepts, and to have the ability to make judgments.

In the area of human relations, the ability to interact with people or to communicate orally was stressed as a necessity for office workers. One study suggested a course at the secondary school level in social intelligence or etiquette.

Generally, the studies were concerned with activities relating to the operating, interacting, and task managing areas of office work.

Chapter 3

Methodology

The study was designed to determine the relative amounts of time which recent business education graduates spent performing various business and office activities. The list of action verbs from NOBELS' (1968) A Taxonomy of Office Activities for Business and Office Education was used to collect data for the study.

Taxonomy of Office Activities

The development of the Taxonomy of Office Activities for Business and Office Education was the final step in the Planning and Feasibility Study for the NOBELS' (New Office and Business Education Learnings System) Project at the Center for Vocational and Technical Education, Ohio State University. It was developed to provide:

- (a) systematic guidance for the observation and analysis of office activities;
- (b) a common language for describing office activities;
- (c) a basis for consolidating data from many locations and occupations;
- (d) data for writing performance goals. (1968, p. v)

Developmental Procedures

The development of the Taxonomy began with a review of secondary sources of information about office activities. The data collected through this review were used to develop

and revise several trial taxonomies. These trial versions and their conceptual bases were further developed and reviewed with assistance from a number of consultants and advisors who suggested several taxonomies and strategies and offered position papers on significant, relevant issues. The Taxonomy which emerged from this process of trial and revision then was tested by using it to describe office activities observed in visits to several business firms. Finally, several juries reviewed the Taxonomy and the present version was prepared.

Structure of the Taxonomy

The Taxonomy was developed within a framework of action verbs to provide both an action and a constant base for describing office tasks and activities. Approximately 2,000 verbs were studied to uncover sets or groups. After intensive study and analysis, thirteen verbs were selected because of their importance to the processing of data and were designated as primary divisions of a domain labeled "Operating." Two more domains, "Interacting" with three primary divisions, and "Managing" with four primary divisions, were also established.

After the three domains and the primary divisions of each of the domains had been determined, secondary divisions were established for each of the primary divisions to indicate distinctive ways in which the action of the primary verb might be carried out. When several verbs were so closely related that, for educational purposes, it seemed unnecessary

to create another division, the verb most appropriate for describing office work was selected as the secondary-division verb. The closely related verbs were put in parentheses beside the secondary-division verb.

Each of the three domains, then, includes primary and secondary-division verbs. The overall structure of the Taxonomy takes the form shown below (NOBELS, p. 16):

- (a)
I - OPERATING DOMAIN
- | | | |
|-----|----------|---------------------------------|
| (b) | (c) | (d) |
| 1.0 | ARRANGE: | putting into an order or system |
-
- | | | |
|------|---------|--------------------|
| (e) | (f) | (g) |
| 1.01 | collate | (integrate, merge) |
-
- (h)
to put together in a predetermined order
- (i)
Given multiple copies of pages for a report,
the worker collates them.
-
- | | | |
|------|-------|--|
| (j) | | |
| 1.06 | other | |

KEY

- (a) Domain
- (b) Primary-Division Number
- (c) Primary-Division Verb
- (d) Primary-Division Verb Definition
- (e) Secondary-Division Number
- (f) Secondary-Division Verb
- (g) Related Verbs (Secondary Division)
- (h) Secondary-Division Verb Definition
- (i) Secondary-Division Verb Task Example
- (j) Provision for adding Secondary Division Verbs

Taxonomy Definitions (NOBELS' p. 145)

Activity. An activity is a group of tasks occurring in close proximity that have a common purpose.

Domain. A domain is one of the three sections (Operating, Interacting, and Managing) in the Taxonomy of Office Activities within which action verbs may be grouped.

Interacting Domain. The interacting domain includes the categories of verbs which describe the interpersonal relationships involved in the performance of office tasks.

Managing Domain. The managing domain includes the categories of verbs which describe the administering activities in which office workers are involved.

Operating Domain. The operating domain includes categories of verbs which describe the operations involved in the processing of data.

Primary-Division Verbs. Primary-division verbs are those verbs which constitute the divisions of each of the three domains.

Related Verbs. Related verbs are those verbs which have approximately the same meaning as the secondary-division verbs. Related verbs are listed in parentheses beside the secondary-division verbs.

Secondary-Division Verbs. Secondary-division verbs are those verbs which are listed under each of the primary-division verbs.

Taxonomy. A taxonomy is an orderly classification system that provides for an identification of relationships.

Population and Sample

The School Setting

St. Joseph Composite High School is a medium-sized urban high school that offers a wide range of general, matriculation, vocational and technical programs. In June 1968, the population of the school was 1,167, of which 424 were in Grade XII.

Population

Half of the population for this study was taken from the group of business education graduates from St. Joseph Composite High School, Edmonton, Alberta, who had completed Office Practice 30 in June, 1967 and June, 1968. After contacting the ninety-five graduates by telephone and through the mail, it was learned that seventh-three were working in office-type jobs, eight were married and staying at home, and fourteen were in jobs which did not include business and office activities.

The population for the study, then, included the seventy-three graduates who held office-type jobs and their respective immediate supervisors.

Sample

A sample of thirty, randomly selected from the seventy-three business education graduates, and their immediate supervisors constituted the sample for the study.

The Instrument

A questionnaire comprised of two parts was used to collect data for the study. Part 1 regarding personal data was completed only by the graduates from the sample. The information was requested in order to present a profile of the employees who participated in the study, and to indicate the kinds of positions which they filled.

Part 2 of the questionnaire contained a list of the twenty primary-division verbs and the twenty groups of their related secondary-division verbs from the Taxonomy. Respondents were asked to check each item in each group, one group at a time, on a five-point scale, to denote the relative amount of time spent performing each activity. This part of the questionnaire was completed by the employees and by their immediate supervisors, both groups describing the duties of the employees.

To assist the respondents, and to insure uniformity in the administration of the instrument, decks of cards containing definitions of all verbs were provided. Respondents were asked to sort the cards for each group of activities, one group at a time, into five positions. Position 5 represented the most time and Position 1 represented the least time or no time spent on an activity. Upon completion of the sorting, respondents were requested to record their results on the questionnaire.

A copy of the personal-data form, the letter to supervisors, the guide sheet, the questionnaire, and the

definitions of activities, may be found in Appendices A, B, C, D, and E respectively.

A pilot run was conducted using an instrument similar to the questionnaire. Four employees not belonging to the population used in the study were asked to indicate the time spent on each activity by circling the letters R for rarely, S for sometimes, F for frequently, G for generally, and A for almost always. They expressed the views that the questionnaire was difficult to complete and that it took a considerable length of time to complete. The present form of the questionnaire was devised in an effort to overcome these two problems. When the present form was used by another four office workers, no problems were encountered and the time to complete the questionnaire was considerably reduced.

The Procedure

A letter and a questionnaire, together with a deck of cards containing the definitions of verbs or activities were presented to each subject of the sample--the office employees and their immediate supervisors--for completion.

Responses from the sample of thirty employees and the thirty supervisors were tabulated separately. A total count was made of the responses for each of the five points on the scale for each activity. From these results, a scale value was computed for each activity for employee responses and for each activity for supervisor responses. These scale values were converted to standard scores or z scores.

Pearson's product moment correlation coefficients were computed from the standard scores of employee and of supervisor responses for the group of primary activities and for each of the twenty groups of secondary activities.

Chapter 4 of the study presents the accumulated data and the statistical results of comparing employee and supervisor responses.

Chapter 4

Presentation of Data

The survey was conducted to determine the relative amounts of time which recent business education graduates spent performing various business and office activities.

Thirty employees for the study were randomly selected from business education graduates who had completed Office Practice 30 in June, 1967 and in June, 1968 at St. Joseph Composite High School, Edmonton, Alberta. Their immediate supervisors also participated in the project.

Profile of Employees

The sample of employees included thirteen girls and one boy from the forty-two Office Practice 30 students who graduated in June, 1967, and sixteen girls from the fifty-three students who graduated in June, 1968. The average age of the employees was twenty years. Seven girls of the thirty were married.

Initial employment was obtained in a variety of ways. Three found jobs through a relative, five through a teacher, and seven through a friend. Canada Manpower placed five, newspaper advertisements resulted in employment for four, and the remaining six took the initiative to make direct applications.

The gross starting salaries and present (July, 1969)

salaries for the thirty employees are shown in Table 1.

TABLE 1

Gross Monthly Salaries of Employees

Employees	Starting	Present*
1967 Graduates	\$227.	\$312.
1968 Graduates	\$240.	\$283.
Composite Average	\$235.	\$299.

*July, 1969

These thirty employees held a total of forty-eight jobs with an average duration of ten months over the period from June 30, 1967 to June 30, 1969. Each of the following reasons for leaving jobs was given once:

- (a) a temporary position
- (b) boredom
- (c) conflict with supervisor
- (d) did not like the work
- (e) losing typing speed
- (f) shorthand not being used
- (g) no consideration for promotion into another department
- (h) not enough challenge
- (i) not the kind of work desired
- (j) pregnant
- (k) salary too low
- (l) too routine
- (m) wanted something more interesting
- (n) wanted to improve my position
- (o) wanted to travel.

Figure 1 presents the types of organizations for which these employees worked, and the job titles they possessed at the time of the survey. Fourteen of the employees worked in business organizations, eight were employed by government,

Employee Jobs

Type of Organization	Job Title
General Business	
advertising	typist
bank	audit clerk
	teller, clerk typist
broker	order desk clerk
contractor	billing machine operator
	clerk typist, bookkeeper
	receptionist
insurance	correspondence typist
oil company	keypunch operator
	verifier operator
refrigeration equipment	keypunch operator
service station equipment	bookkeeping machine operator
trust company	teller
utility	billing clerk
Government	
city	
power	receptionist
provincial	
education	clerk
health	junior clerk typist
industry and tourism	clerk typist
liquor control	clerk stenographer
	clerk typist
telephones	senior clerk
Workmen's Compensation	keypunch operator
Institutional	
University of Alberta--	
services	computer operator
Professional	
associations	secretary
barristers and solicitors	file clerk
	receptionist
	secretary
	stenographer
clinical laboratory	laboratory receptionist
physicians and surgeons	clerk typist

Fig. 1. N = 30

while another eight found jobs in institutional or professional organizations.

Comparison of Employee and Supervisor Responses

To review, the questionnaire used in the survey contained one group of twenty primary activities and twenty groups of secondary activities. Each group of secondary activities indicated distinctive ways in which its corresponding primary activity might be carried out. Respondents checked each item in each group of activities, one group at a time, on a five-point scale, to denote relative amounts of employee time spent performing an activity.

Responses for the employees and supervisors were tabulated separately. Scale values for each activity for each group of respondents were calculated. The scale values were converted to standard scores. Means of the scale values for the three domains were also computed.

Primary Activities

Three domains--operating, interacting, and managing--comprise the primary activities. The mean standard score for employee responses in the Interacting Domain was $-.06$, while the mean standard score for supervisors was $+.35$. No difference existed between the means for employees and supervisors in the other two domains. An analysis of the three primary activities within the Interacting Domain revealed that supervisors tended to rate assisting activities higher than did employees in terms of relative amounts of time.

Standard scores for the primary activities for employee and supervisor responses are illustrated in Figure 2. Mean standard scores for employee and supervisor responses for each of the three domains are shown in Table 2.

TABLE 2
Mean Standard Scores of Three Domains
Employee and Supervisor Responses

Domain	Employees	Supervisors
Operating	+.09	+.09
Interacting	-.06	+.35
Managing	-.70	-.73

Although the mean of the three activities within the primary category of the Interacting Domain differed for employees and supervisors, there was a very high correlation between their responses for all three groups of secondary activities as illustrated in Table 3.

Another point of difference in the responses of employees and supervisors occurred within the primary category of the Operating Domain. Employee scores were higher than supervisor scores for manipulating operations. Again, a very high correlation was evident in the responses relating to manipulations in this group of secondary activities.

Secondary Activities

Pearson's product moment correlation coefficients were computed for the group of primary activities and for each

Three Domains of Primary Activities

Standard Scores for Employee and Supervisor Responses

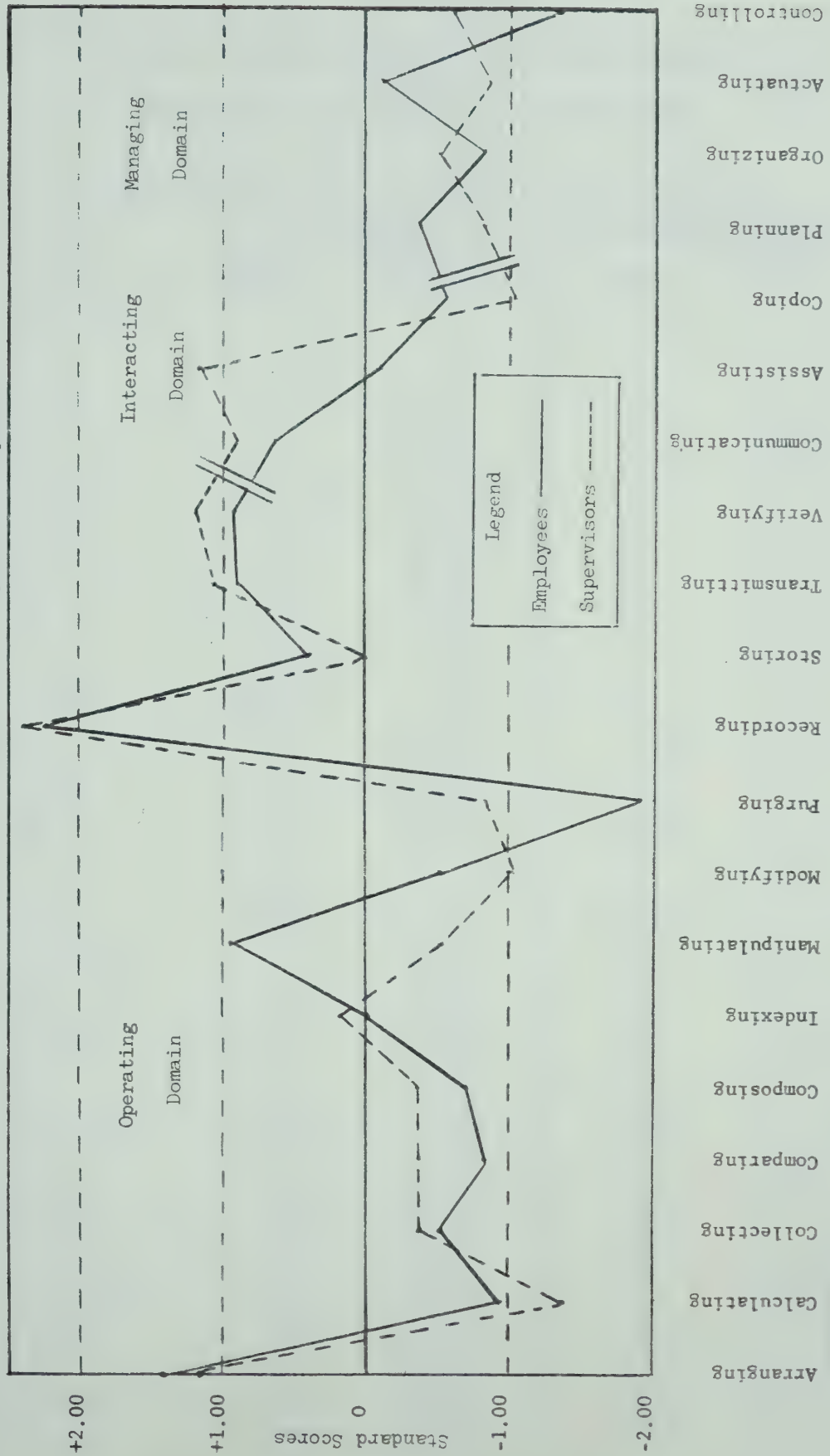


Fig. 2. // separate the domains.

TABLE 3
Rank, Standard Score, and Correlation
Employee and Supervisor Responses
for Primary and Secondary Activities

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
Operating					
*Recording	1/1**	+2.28	1/1**	+2.41	
copy	1	+1.52	1	+1.69	
duplicate	2	+1.06	2.5	+0.72	
write	3	+0.94	2.5	+0.72	
register	4	-0.12	4	+0.24	
post	5	-0.47	5	-0.24	.96
transcribe	6	-0.59	6	-0.36	
tape	7	-1.18	8	-1.57	
chart	8	-1.29	7	-1.08	
*Arranging	2/2**	+1.40	2.5/3**	+1.21	
sort	1	+1.18	1.5	+1.11	
compile	2	+0.88	1.5	+1.11	
collate	3	-0.59	4.5	-1.11	.81
rank	4	-0.88	4.5	-1.11	
batch	5	-1.18	3	-0.55	
*Verifying	4/4**	+0.88	2.5/3**	+1.21	
proofread	1	+1.25	1	+1.41	
check	2	+0.94	2	+0.78	
reconcile	3	-0.31	4	-0.63	.94
validate	4	-0.94	3	-0.31	
audit	5	-1.25	5	-1.41	
*Transmitting	4/4**	+0.88	4/5**	+1.03	
forward	1.5	+1.22	1	+1.58	
switch	1.5	+1.22	6.5	+0.18	
circulate	3	+0.98	6.5	+0.18	
dispatch	4.5	+0.73	3	+1.23	
distribute	4.5	+0.73	4	+0.88	
deliver	6.5	+0.49	2	+1.40	.79
submit	6.5	+0.49	8	0	
remit	8	+0.24	10.5	-0.35	
dispense	9.5	-0.24	9	-0.18	
send	9.5	-0.24	10.5	-0.35	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
route	11.5	-0.49	5	+0.35	.88
publicize	11.5	-0.49	14.5	-1.58	
charge out	13	-1.22	12	-0.70	
lend	14	-1.71	13	-1.40	
display	15	-2.20	14.5	-1.58	
*Manipulating	4/4**	+0.88	10/12.5**	-0.52	
stamp	1	+2.14	1	+2.00	
feed	2	+1.43	4	+1.33	
numbering	3	+1.25	2	+1.83	
punch	4.5	+1.07	3	+1.50	
fasten	4.5	+1.07	9	+0.67	
pull	6.5	+0.89	9	+0.67	
fix	6.5	+0.89	12.5	+0.33	
stuff	9	+0.54	7	+0.83	
load	9	+0.54	14	0	
erase	9	+0.54	16	-0.33	
pack	11	+0.18	9	+0.67	
open	12.5	0	12.5	+0.33	
wrap	12.5	0	16	-0.33	
seal	14	-0.18	5.5	+1.00	
fold	15.5	-0.36	11	+0.50	
cut	15.5	-0.36	20.5	-0.83	
thread	18	-0.71	16	-0.33	
clean	18	-0.71	18.5	-0.67	
ink	18	-0.71	20.5	-0.83	
lock	20	-0.89	5.5	-1.00	
laminate	21	-1.07	23	-1.17	
sharpen	22.5	-1.25	18.5	-0.67	
splice	22.5	-1.25	24	-1.33	
brush	24	-1.43	22	-1.00	
scrape	25	-1.79	25	-1.50	
*Storing	6/7**	+0.35	6/8**	0	.95
file	1	+1.64	1	+1.69	
reserve	2	+0.33	3	-0.15	
deposit	3	-0.16	2	+0.15	
protect	4	-0.66	4	-0.92	
stock	5	-1.31	5	-1.08	
*Indexing	7/8**	0	5/7**	+0.17	.93
label	1	+1.66	1	+1.59	
cross-reference	2	+0.17	3	0	
code	3	-0.17	2	+0.68	
encode	4	-0.66	4	-0.68	
decode	5	-1.33	5	-1.36	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
*Collecting	8.5/13**	-0.53	8/10**	-0.34	
search	1	+1.67	1	+1.32	
gather	2	+0.83	2	+1.13	
order	3.5	+0.42	3	+0.75	
obtain	3.5	+0.42	4.5	+0.19	.98
scan	5.5	0	4.5	+0.19	
select	5.5	0	6	0	
preview	7	-0.83	7	-0.75	
retrieve	8	-1.25	8	-1.32	
borrow	9	-1.67	9	-1.70	
*Modifying	8.5/13**	-0.53	12.5/18.5**	-1.03	
correct	1	+2.39	1	+2.00	
revise	2	+1.19	2	+1.50	
perfect	3	+0.60	3	+0.67	
convert	4	+0.15	8.5	-0.83	
adapt	5.5	-0.30	4	+0.17	
decrease	5.5	-0.30	6	-0.33	.91
transpose	7	-0.45	5	0	
increase	8.5	-0.60	7	-0.67	
restore	8.5	-0.60	8.5	-0.83	
qualify	10	-0.90	11	-1.17	
temper	11	-1.19	10	-1.00	
*Composing	10/15**	-0.70	8/10**	-0.34	
write	1	+2.20	1	+2.00	
edit	2	+1.00	2	+1.25	
document	3	+0.40	3.5	+0.25	
outline	4	0	3.5	+0.25	
design	5.5	-0.20	6	-0.50	.96
draft	5.5	-0.20	6	-0.50	
annotate	7	-0.40	6	-0.50	
summarize	8.5	-1.20	8	-0.75	
paraphrase	8.5	-1.20	9	-1.50	
*Comparing	11.5/17**	-0.88	8/10**	-0.34	
match	1	+1.43	1	-1.18	
associate	2	-0.24	2	-0.59	.99
distinguish	3	-0.95	3	-1.18	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
*Calculating	11.5/17**	-0.88	13/20**	-1.38	.91
total	1	+2.50	1	+2.34	
count	2	+1.67	2	+1.70	
compute	3	+0.83	3	+1.28	
balance	4.5	+0.63	5.5	+0.42	
compound	4.5	+0.63	5.5	+0.42	
accrue	6.5	+0.42	4	+0.64	
cross-balance	6.5	+0.42	12.5	-0.64	
cross-foot	8.5	0	10	-0.42	
discount	8.5	0	14	-0.85	
estimate	11.5	-0.21	7	+0.21	
prorate	11.5	-0.21	8	0	
extend	11.5	-0.21	10	-0.42	
price	11.5	-0.21	12.5	-0.64	
measure	14	-0.83	10	-0.42	
depreciate	15.5	-1.04	16	-1.06	
determine percents	15.5	-1.04	16	-1.06	
average	17	-1.25	16	-1.06	
determine ratios	18	-1.67	18	-1.28	
*Purging	13/20**	-1.93	11/16**	-0.86	.82
weed	1	+1.36	1	+1.39	
consume	2	+0.68	2	+0.83	
cancel	3	+0.45	4	-0.28	
discard	4	-0.23	5	-0.55	
eliminate	5	-0.91	3	+0.28	
destroy	6	-1.59	6	-1.66	
<u>Interacting</u>					
*Communicating	1/6**	+0.53	2/6**	+0.86	.91
consult	1.5	+2.07	2	+1.97	
listen	1.5	+2.07	2	+1.97	
thank	3	+1.55	5	+1.06	
inquire	5	+1.21	2	+1.97	
answer	5	+1.21	5	+1.06	
discuss	5	+1.21	7	+0.76	
request	7	+0.69	10	+0.15	
explain	9	+0.52	5	+1.06	
question	9	+0.52	8	+0.45	
affirm	9	+0.52	11.5	0	
detail	11	+0.17	9	+0.30	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
summarize	13	0	11.5	0	.97
repeat	13	0	18.5	-0.61	
suggest	13	0	18.5	-0.61	
express	15.5	-0.17	14	-0.15	
page	15.5	-0.17	24.5	-1.06	
invite	17.5	-0.34	16	-0.30	
negotiate	17.5	-0.34	18.5	-0.61	
describe	20	-0.52	14	-0.15	
persuade	20	-0.52	22	-0.91	
reveal	20	-0.52	22	-0.91	
debate	22	-0.69	18.5	-0.61	
elicit	23	-0.86	24.5	-1.06	
quote	24.5	-1.03	14	-0.15	
emphasize	24.5	-1.03	22	-0.91	
demand	26	-1.55	26	-1.36	
canvass	27	-1.72	27	-1.82	
*Assisting	2/9.5**	-0.18	1/3**	+1.21	.91
aid	1	+1.79	1	+1.94	
welcome	2	+1.43	2	+1.34	
inform	3.5	+0.71	3.5	+0.90	
show	3.5	+0.71	3.5	+0.90	
encourage	5	+0.54	7.5	0	
alert	6.5	+0.18	5.5	+0.15	
remind	6.5	+0.18	7.5	0	
orient	8.5	-0.18	5.5	+0.15	
instruct	8.5	-0.18	9	-0.15	
advise	10	-0.54	10	-0.30	
escort	11	-1.07	11	-1.04	
intercede	12	-1.43	12	-1.34	
placate	13	-1.61	13	-1.64	
*Coping	3/13**	-0.53	3/18.5**	-1.03	.91
obey	1	+2.80	1	+2.40	
co-operate	2	+2.67	2	+2.80	
respect	3	+1.60	3.5	+1.20	
socialize	4	+1.47	3.5	+1.20	
yield	5.5	+0.80	13	+0.13	
endure	5.5	+0.80	17	-0.13	
verbalize	7	+0.67	9.5	+0.27	
accept	8	+0.53	7.5	+0.53	
adapt	9.5	+0.27	5	+1.07	
admit	9.5	+0.27	6	+0.67	
excel	11.5	+0.13	9.5	+0.27	
refrain	11.5	+0.13	19.5	-0.40	
apologize	14.5	0	7.5	+0.53	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
compromise	14.5	0	11	+0.27	
charm	14.5	0	13	+0.13	
persevere	14.5	0	13	+0.13	
forgive	17	-0.13	19.5	-0.40	
circumvent	19.5	-0.27	17	-0.13	
emphathize	19.5	-0.27	21.5	-0.53	
compete	19.5	-0.27	23.5	-0.67	
rationalize	19.5	-0.27	25	-0.80	
compensate	22.5	-0.53	15	0	
hint	22.5	-0.53	27	-1.07	
innovate	24	-0.67	23.5	-0.67	
improvise	25.5	-0.80	21.5	-0.53	
refuse	25.5	-0.80	27	-1.07	
coax	27	-0.93	17	-0.13	
avoid	29	-1.07	29.5	-1.20	
bluff	29	-1.07	29.5	-1.20	
withdraw	29	-1.07	31	-1.33	
disregard	31	-1.33	27	-1.07	
boast	32	-1.47	32	-1.47	
<u>Managing</u>					
*Actuating	1/9.5**	-0.18	3.5/16**	-0.86	
perform	1	+2.14	1	+2.33	
expedite	2	+0.71	3.5	0	
adjust	3	+0.48	2	+0.27	
implement	4	-0.12	3.5	0	
motivate	5	-0.36	5	-0.68	.94
initiate	6	-0.48	7	-0.82	
enforce	7	-0.95	7	-0.82	
substitute	8	-1.19	7	-0.82	
*Planning	2/11**	-0.35	3.5/16**	-0.86	
classify	1	+1.18	1	+1.28	
analyze	2	+0.98	2	+0.51	
budget	3	-0.39	4	-0.77	.64
forecast	4	-0.78	5	-1.54	
design	5	-1.37	3	+0.25	
*Organizing	3/17**	-0.88	1/12.5**	-0.52	
systematize	1	+2.92	1	+3.05	
allocate	2	+0.42	2	+0.68	
schedule	3	+0.14	7	-0.17	.97
centralize	4.5	0	3	+0.17	
decentralize	4.5	0	4.5	0	

TABLE 3 (continued)

Domain	Employees		Supervisors		r
	Rank	Standard Score	Rank	Standard Score	
equip	6.5	-0.14	7	-0.17	.78
automate	6.5	-0.14	9.5	-0.34	
appoint	8	-0.42	4.5	0	
eliminate	9	-0.56	9.5	-0.34	
delegate	10	-0.69	7	-0.17	
dismiss	11	-0.83	11.5	-1.02	
employ	12	-1.25	11.5	-1.02	
*Controlling	4/19**	-1.40	2/14**	-0.69	
regulate	1	+2.05	1.5	+1.47	
approve	2	+1.14	5.5	-0.29	
evaluate	3	+0.68	1.5	+1.47	
recommend	4	0	3.5	0	
prevent	5	-0.23	5.5	-0.29	
supervise	6.5	-0.68	3.5	0	
limit	6.5	-0.68	9	-1.47	
permit	8	-0.23	7	-0.29	
disapprove	9	-1.36	8	-1.18	

*r = .79 for primary activities

**Ranking within domain, and within primary category

group of secondary activities based on employee and supervisor responses. The results are shown in Table 3.

Analysis of Employee Activities

Findings resulting from the survey are presented under the headings of the three domains of activities--operating, interacting, and managing--using the primary activities within each domain as sub-headings.

Operating Domain

The operating domain includes categories of activities which describe the operations involved in the processing of data.

Recording. Placing data or information on paper, film, tape, or other media. Employees and supervisors ranked this primary activity first of the twenty in terms of employee time. Of the eight secondary activities listed in this category, the following, in rank order, occupied the most time:

1. copy (facsimile, keypunch, microfilm, photograph, typewrite, trace)*
2. write (handprint, handwrite, initial, inscribe, mark, mark sense, sign, take dictation)
3. duplicate (print, reproduce)
4. register (book, enter, log)
5. post (credit, debit, journalize)
6. transcribe (translate)

Arranging. Putting into an order or system. Employees

*Related activities are shown in parentheses.

and supervisors ranked arranging activities in second place of the twenty primary activities. The secondary activities within this category which ranked high in respect to employee time, of the five listed, were:

1. sort (separate)
2. compile (assemble, combine, consolidate)

Verifying. Determining the accuracy or inaccuracy of data. Activities of this primary classification also ranked high by both employees and supervisors. Of the five secondary activities, most time was spent on:

1. proofread: to read and mark corrections
2. check: to inspect for satisfactory condition

Transmitting. Giving out or sending out. Both groups of respondents ranked this category of activities in fourth place within the Operating Domain. Of the fifteen secondary activities, those occupying the most time were:

1. forward (pass on)
2. deliver (bear, carry, hand over, move, transport)
3. dispatch: to send with promptness
4. distribute (disperse, disseminate)
5. route (channel)

Manipulating. Performing simple manual or mechanical operations. Employees ranked this primary activity higher than did supervisors although the ranking of the twenty-five secondary activities within the category was very similar. These tasks occupied the most time according to both groups of respondents:

1. stamp: to record with a stamping device
2. feed: to move into a machine or opening
3. numbering: to assign a number to
4. punch (perforate)

Storing. Setting aside for future use. Both groups ranked storing in sixth place within the Operating Domain. The secondary activity in this category which occupied by far the most time, according to both groups of respondents, was:

1. file: to arrange systematically for the purpose of preservation and reference

Indexing. Determining and indicating categories to which materials may be assigned. Of the five secondary activities within this category, those which occupied the most time, according to both groups of respondents, were:

1. label: to place suitable marks or tape to items to identify contents
2. cross-reference: to prepare a means for referring to a document by a subject name, or number, other than that which the document is filed
3. code: to indicate by symbols or words the category to which materials have been assigned

Collecting. Creating and developing written information. Supervisors indicated that more time was spent on the primary category of composing than did the employees. Both groups, however, agreed that these secondary activities, of the nine, ranked first:

1. edit (revise, rewrite)
2. document (support)
3. outline: to prepare a point by point list of the principal parts or features

Comparing. Examining in order to determine similarities and differences. Supervisors ranked this primary activity higher than did employees with respect to time. Both groups of respondents agreed that the following secondary activity, of three, ranked first:

1. match: to put together according to equal or harmonious attributes

Modifying. Making changes. Supervisors indicated that less time was spent on this primary activity than did employees. Both groups were in agreement on the ranking of the secondary activities. These were ranked highest of the eleven tasks:

1. correct (debug, rectify, remedy, repair, right)
2. revise (amend, improve, rearrange, revamp, streamline, update)
3. perfect (polish, refine)

Calculating. Computing new data from present data by some mathematical process or combination of processes. Relative to comparative amounts of time spent on the twenty primary categories of activities, supervisors ranked calculating activities at the bottom of the scale. Employees ranked the category in seventeenth place. Of the eighteen secondary activities, these occupied the most time:

1. total (foot, sum)
2. count (enumerate)
3. compute: to reach a solution by the use of arithmetical processes

Purging. Destroying or eliminating. Employees ranked purging activities at the bottom of the scale of primary

activities with respect to time, while supervisors ranked it in sixteenth place. The secondary activity of the group of six which occupied the most time was:

1. weed (clean, clear, screen)

Interacting Domain

The Interacting Domain includes the categories of activities which describe the interpersonal relationships involved in the performance of office tasks.

Communicating. Oral means of requesting, giving, receiving, or discussing information. The primary activity of communicating ranked sixth of the twenty by both employees and supervisors. Within the secondary category of twenty-seven activities, these occupied the most time:

1. consult (confer)
2. listen (attend, hear, heed)
3. thank: to express appreciation for
4. answer (reply, respond, retort)
5. explain (clarify, elucidate, interpret, rephrase)
6. discuss: to talk over

Assisting. Morale building, guiding, and training-type activities performed by office workers. Supervisors ranked this primary activity first within the Interacting Domain. However, regarding the thirteen secondary activities, they were very much in agreement on the following ranking with employees regarding time:

1. aid (help, serve, support)
2. welcome (greet)

3. show (demonstrate, illustrate)
4. inform (appraise, enlighten, notify)
5. alert (caution, forewarn, warn)
6. orient (acquaint, direct, familiarize)

Coping. Using strategies to deal with threat--positive action to overcome; negative action to overcome; action to escape; no action. This primary activity was ranked lowest within the Interacting Domain by both employees and supervisors. Employees did spend time, however, on the more positive activities within this primary division. Of the thirty-two activities, these were placed first by both groups of respondents:

1. cooperate (collaborate)
2. obey (comply, follow, heed)

Managing Domain

The Managing Domain includes the categories of activities which describe the administering activities in which office workers are involved.

Actuating. Stimulating and maintaining of performance and effecting corrective measures. Employees ranked this activity first within the Managing Domain. Of the eight secondary activities, both groups ranked in first place:

1. perform (carry out, execute)

Planning. Mental determining of a course of action. Of the five planning activities, both groups of respondents ranked these first:

1. classify (categorize, group, partition)

2. analyze: to determine the nature and relationship of parts

Organizing. Establising the work environment.

Twelve organizing activities were listed. Supervisors ranked this activity first within the Managing Domain. The highest standard score for both employee and supervisor responses of the 230 secondary activities was for:

1. systematize (arrange, order, routinize)

Controlling. Evaluating work performed and the determination and recommendation of corrective measures based on feedback. Both groups of respondents indicated that the following secondary activity occupied the most time of the nine activities listed in this group:

1. regulate (direct, govern, manage, order, regularize)

Summaries of employee and supervisor responses are shown in Figures 3 and 4.

EMPLOYEE RESPONSES

Primary and Secondary Activities

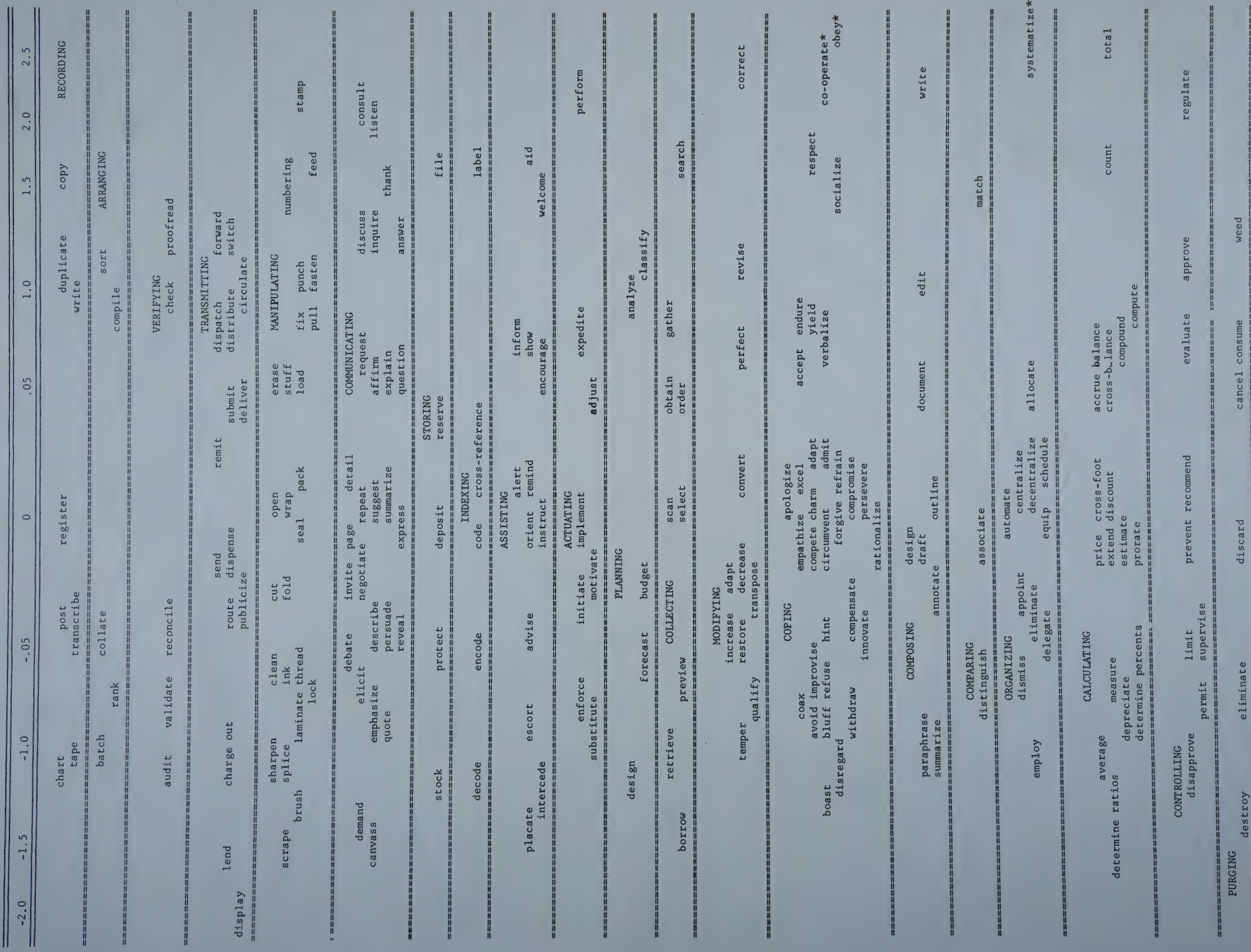


Fig. 3. The X-axis represents standard scores for the secondary activities. Placement of the primary activity (in capitals) on the X-axis represents the level on the Y-axis of the standard scores.
* Position of the activity on the scale is to the right of the word rather than to the left.

SUPERVISOR RESPONSES
Primary and Secondary Activities

-1.5	-1.0	-.05	0	.05	1.0	1.5	2.0	2.5	3.0
tape	chart		post transcribe	register	duplicate write	compile sort	copy	RECORDING	
	collate rank	batch			ARRANGING				
audit		reconcile validate		check	VERIFYING proofread				
	escort	advise	alert orient encourage remind instruct	show welcome inform	aid				
placate		charge out	dispense	route	TRANSMITTING distribute	forward deliver			
lend display publicize		remit send	switch	submit	dispatch				
canvass	demand	emphasize persuade debate reveal negotiate elicit repeat page suggest	invite describe express quote request affirm summarize	question detail	COMMUNICATING answer explain thank discuss	inquire consult listen			
	decode	encode	INDEXING cross-reference	code	label				
	protect stock	STORING deposit reserve			file				
	retrieve	preview	COLLECTING obtain scan select	order	gather				
borrow									
paraphrase		annotate design draft summarize	COMPOSING document outline	edit	write				
		associate	COMPARING match						
	splice	cut ink	MANIPULATING erase thread wrap	fasten pack pull stuff fold	seal lock	stamp numbering			
scrape	brush laminates	clean sharpen	load	open	punch				
			ORGANIZING automate appoint eliminate decentralize equip centralize schedule	allocate				systematize*	
	dismiss employ	approve prevent supervise	CONTROLLING recommend adjust expedite implement	evaluate regulate					
limit	disapprove	permit	ACTUATING motivate enforce initiate substitute						
			PLANNING budget	design analyze	classify				
forecast		PURGING discard cancel	eliminate	consume	weed				
destroy		MODIFYING convert qualify restore temper increase	decrease transpose	perfect	revise	correct			
	avoid	COPING refrain empathize	circumvent compromise admit charm accept apologize adapt	respect socialize					
boast	disregard	compete	coax	persevere verbalize	co-operate *	obey			
withdraw	rationalize	forgive	endure	yield					
hint	innovate	improvise	compensate						
refuse									
bluff									
	CALCULATING	discount depreciate price determine percentages	cross-foot extend measure cross-balance	accrue balance compound	compute	count	total		
	determine ratios average								

Fig. 4. The X-axis represents standard scores for the secondary activities. Placement of the primary activity (in capitals) on the X-axis represents the level on the Y-axis of the standard scores.
* Position of the activity on the scale is to the right of the word rather than to the left.

Chapter 5

Summary, Conclusions, and Implications

In order to prepare students for office occupations, educators must be aware of current office practices so that course content and skill development will be relevant in terms of student needs and of present-day office requirements.

The purpose of this study was to determine the relative amounts of time which recent business education graduates spent performing various business and office activities.

A questionnaire based on NOBELS' (1968) A Taxonomy of Office Activities for Business and Office Education was used to collect data from recent business education graduates of a comprehensive high school and from their immediate supervisors regarding employee duties.

The Taxonomy includes three domains of activities--operating, interacting, and managing. These are sub-divided into twenty primary-division verbs (activities) which, in turn, are sub-divided into twenty groups of secondary-division verbs (activities).

Respondents scored each activity in the primary group and in each of the secondary groups on a five-point scale with respect to the comparative amounts of time devoted to the activities.

Scale values were calculated for each activity for employee and supervisor responses. Standard scores were

calculated and correlations were computed for the group of primary activities and for each group of secondary activities.

Summary of Findings and Conclusions

The presentation which follows appears in rank order by domain, by primary activity, and by secondary activity, according to employee responses with respect to the relative amounts of time spent in the performance of various office duties. Differences in employee and supervisor responses are noted. High ranking activities included in the discussion represent about one-quarter of the 230 secondary activities.

Operating Domain

Recording. Copy activities such as typewrite, key-punch, and photo-copy; write; duplicate; register; post; and transcribe were duties performed by recent graduates. While some of these recording activities can be handled by the use of copy machines where on-the-job training is practical, other activities involving machines require intensive instruction and application.

Arranging. Employees sort and compile in putting records into an order system.

Verifying. Employees proofread and check to determine the accuracy or inaccuracy of data.

Transmitting. Employees forward, deliver, dispatch, distribute, and route whatever must be given out or sent out.

Manipulating. Duties included in this category are stamp, feed, numbering, punch. Supervisors ranked manual and

mechanical operations lower than did employees.

Storing. Employees file or arrange items systematically for future use.

Indexing. Employees label, cross-reference, and code materials. This involved determining and indicating categories.

Collecting. Search, gather, and order duties were the high-ranking secondary activities in this category.

Composing. In creating and developing written information, employees edit or revise, document, and outline.

Comparing. Employees match or examine records in order to determine similarities or differences.

Modifying. Employees correct, revise, and perfect written material. Note the accuracy and communication elements in this category.

Calculating. Mathematical assignments which occupied the most time included total, count, and compute by the use of arithmetical processes.

Purging. Employees weed or remove materials selectively from the files.

Interacting Domain

According to supervisor responses, the Interacting Domain ranked first of the three domains as determined by the mean standard score of these three primary activities:

Communicating. Oral communications such as consult, listen, thank, answer, explain, and discuss occupied employee time. Note that half of these six high-ranking activities

involved giving information.

Assisting. Employees aid, welcome, show or demonstrate, inform, alert, and orient others. Note that three of these six high-ranking duties were training-type activities. Supervisors ranked this primary category higher than did employees in their responses.

Coping. Employees cooperate, and obey or follow directions. A further examination of activities in this secondary group of activities revealed that positive strategies in coping with office situations ranked highest.

Managing Domain

Actuating. Employees perform or execute the duties for which they are responsible.

Planning. In the mental determining of a course of action, employees classify according to common elements, and analyze or determine the relationship of parts.

Organizing. In establishing the work environment, employees systematize or routinize their tasks in a methodical order.

Controlling. Employees regulate or manage their duties with respect to methods and standards.

The high correlation between employee and supervisor responses for the primary classification of activities, and for their corresponding groups of secondary activities, indicate that these are the activities in which beginning office employees are involved.

The indication, which supervisor responses provided,

that interacting activities occupied the most time of beginning office workers, is also worth noting.

Implications for Education

Business education programs in our secondary high schools have the two-fold objective of providing the student with theoretical and practical learnings. Many high school graduates from these programs seek office employment immediately after completing a business education program of studies.

This study has indicated the kinds of activities--operating, interacting, and managing--which a beginning office worker is likely to encounter in the world of work. Timewise, the interacting activities constitute an important element in the performance of office duties. The activities within each of the three domains should not be thought of as isolated entities. Rather, they may be described as multi-dimensional in their make-up.

If the objective of the learning process is the achievement of relevant performance skills, the implications from these findings seem to point to the necessity of varied day-to-day assignments which involve not only the operations, but also the interactions and task management activities which apply. Curriculum builders should make provision for the inclusion of the kinds of experiences which employees actually encounter. This does not mean that all experiences should take place within the four walls of a classroom.

While a "simulated" office can provide many of these experiences, it is only through an extended program incorporating work-experience that a "real" atmosphere, with its varied interactions and pressures, can be provided. An extended program of this nature would also assist the student in making the transition from the school environment to the business world.

Recommendations for Further Research

Regular surveys or follow-up studies should be made in order to determine whether the programs of studies in the secondary schools are meeting the needs of the students. It is recommended that studies of this type be done periodically, covering graduates with up to five years of experience, in an effort to ascertain changes pertinent to the business education curriculum.

A study in greater depth of one domain only is another suggested area for further research. The authors of the Taxonomy suggest that by adding nouns, adjectives, or phrases to the verbs, an all-inclusive list of office activities could be developed, since verbs represent fundamental processes that remain unchanged although procedures in their performance may change. A study, for example, of the activities within the Managing Domain, could provide detailed examples of each secondary activity and, at the same time, indicate how these managing tasks relate to activities within the other domains.

A two-way communication with our graduates could serve very purposeful ends. A gratifying element in making this survey was the expression of surprise and pleasure from the employees that an interest in their progress was demonstrated.

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Appendices

Appendix A

P E R S O N A L D A T A

NAME _____ AGE _____ NEE _____

ADDRESS _____ TELEPHONE _____

1. Your Present Status.

- (a) _____ employed full time
- (b) _____ employed part time
- (c) _____ unemployed, looking for work
- (d) _____ unemployed, not looking for work
- (e) _____ self-employed
- (f) _____ none of these Explain: _____

2. Your First Job. Did you find it through

- (a) _____ a friend
- (b) _____ a relative
- (c) _____ a teacher
- (d) _____ a newspaper advertisement
- (e) _____ a school guidance counsellor
- (f) _____ the National Employment Service Office
- (g) _____ Canada Manpower
- (h) _____ none of these Specify: _____

3. Your Present OR Your Most Recent Job.

Company Name _____

Address _____

Type of Business _____

Department _____

Your Job Title _____

Your Immediate Supervisor's Name _____

4. Your Total Experience and Salary After Graduation.

	<u>Date</u>		<u>Gross Monthly Salary</u>	
	<u>From</u>	<u>To</u>	<u>Starting</u>	<u>Present</u>
<u>Name of Company</u>	<u>Mo/Yr.</u>	<u>Mo/Yr.</u>	<u>Starting</u>	<u>Present</u>
(a) _____	_____	_____	_____	_____
(b) _____	_____	_____	_____	_____
(c) _____	_____	_____	_____	_____

5. Your Reasons For Leaving Any Job. Use the reverse side of this sheet.

6. Your Training Beyond High School. Institution and Course Title.

Appendix B

9919 - 76 Street
Edmonton 82, Alberta

(Date)

Dear (Supervisor):

Your assistance is requested in securing data for a thesis entitled "A Survey of Office Activities."

It is hoped that the results of this survey may be useful in areas such as curriculum development in business education at the senior high school level.

You are asked to complete a set of forms regarding the duties of a designated employee whose name has been randomly selected from a list of students who received credits for Office Practice 30.

If you are interested in the results of this project, I would be pleased to give you this information.

Should you have any questions, please phone me at 466-2027.

Your cooperation is very much appreciated. Thank you.

Sincerely,

(Mrs.) Anne Barbara Pura
Department of Industrial and Vocational Education
University of Alberta

Appendix C

GUIDE SHEET

1	2	3	4	5
---	---	---	---	---

SCALE

1. Flip through the cards which describe the primary office activities. Select the card which describes the activity which occupies the most time. Place this card in Position 5 on the scale.
2. Then select the card which describes the activity which occupies no time or the least amount of time. Place this card in Position 1 on the scale.
3. Place each of the remaining cards, one at a time, in a position on the scale depending upon the relative amount of time spent on the activity. You may use any position any number of times.
4. Record on the tally sheet one mark for each activity which corresponds with the position of the activity on the scale.
5. Repeat the same steps for each secondary group of activities.

THANK YOU

Appendix D

QUESTIONNAIRE

T A L L Y

PRIMARY ACTIVITIES

1

2

3

4

5

I	Arranging
II	Calculating
III	Collecting
IV	Comparing
V	Composing
VI	Indexing
VII	Manipulating
VIII	Modifying
IX	Purging
X	Recording
XI	Storing
XII	Transmitting
XIII	Verifying
XIV	Communicating
XV	Assisting
XVI	Coping
XVII	Planning
XVIII	Organizing
XIX	Actuating
XX	Controlling

[illegible]

1	batch
2	collate
3	compile
4	sort
5	rank

[illegible]

- 6 accrue
- 7 average
- 8 balance
- 9 compound
- 10 compute
- 11 count
- 12 cross-balance
- 13 cross-foot
- 14 depreciate
- 15 determine percents
- 16 determine ratios
- 17 discount
- 18 estimate
- 19 extend
- 20 measure
- 21 price
- 22 prorate
- 23 total

[illegible]

24	borrow
25	gather
26	obtain
27	order
28	preview
29	retrieve
30	scan
31	search
32	select

[illegible]

35 match

1	2	3	4	5

44 write

[illegible]

49 label

[illegible]

60 load

[illegible]

OPERATIONS/MANIPULATING (cont)

	1	2	3	4	5
61 lock					
62 numbering					
63 open (unfold)					
64 pack (unpack)					
65 pull					
66 punch					
67 scrape					
68 seal					
69 sharpen					
70 splice					
71 stamp					
72 stuff					
73 thread					
74 wrap					

OPERATIONS/MODIFYING

	1	2	3	4	5
75 adapt					
76 convert					
77 correct					
78 decrease					
79 increase					
80 perfect					
81 qualify					
82 restore					
83 revise					
84 temper					
85 transpose					

OPERATIONS/PURGING

	1	2	3	4	5
86 cancel					
87 consume					
88 destroy					
89 discard					
90 eliminate					
91 weed					

125	affirm
126	answer
127	canvas
128	consult
129	debate
130	demand
131	describe
132	detail
133	discuss
134	elicit
135	emphasize
136	explain
137	express
138	inquire
139	invite
140	listen
141	negotiate
142	page
143	persuade
144	question
145	quote
146	repeat
147	request
148	reveal
149	suggest
150	summarize
151	thank

[illegible]

152	advise
153	aid
154	alert
155	encourage
156	escort
157	inform
158	instruct
159	intercede
160	orient

[illegible]

INTERACTIONS/ASSISTING (con't)

161 placate

162 remind

163 show

164 welcome

INTERACTIONS/COPING

165 accept

166 adapt

167 admit

168 apologize

169 avoid

170 bluff

171 boast

172 charm

173 circumvent

174 COEX

175 compensate

176 compete

177 compromise

178 cooperate

179 disregard

180 empathize

181 endure

182 excel

183 forgive

184 hint

185 improvise

186 innovate

187 obey

188 persevere

189 retionalize

190 refrain

191 refuse

192 respect

193 socialize

194 verbalize

195 withdraw

196 yield

MANAGEMENT/PLANNING

197 analyze

198 budget

199 classify

200 design

201 forecast

[illegible]

MANAGEMENT/ORGANIZING

202 allocate

203 appoint

204 automate

205 centralize

206 decentralize

207 delegate

208 diamias

209 eliminate

210 employ

211 equip

212 schedule

213 systematize

[illegible]

MANAGEMENT/ACTUATING

214 adjust

215 enforce

216 expedite

217 implement

218 initiate

219 motivate

220 perform

221 substitute

[illegible]

MANAGEMENT/CONTROLLING

222 approve

223 disapprove

224 evaluate

225 Limit

226 permit

227 prevent

228 recommend

229 regulate

230 supervise

[illegible]

Appendix E

PRIMARY ACTIVITIES

I - XX

MODIFYING: making changes

VIII

ARRANGING: putting into an order
or system

I

PURGING: destroying or eliminating

IX

CALCULATING: computing new data
from present data by some
mathematical process or combina-
tion of processes

II

RECORDING: placing data or information
on paper, film, tape, or other media

X

COLLECTING: securing data, supplies,
or equipment

III

STORING: setting aside for future use

XI

COMPARING: examining in order to
determine similarities and
differences

IV

TRANSMITTING: giving out or sending
out

XII

COMPOSING: creating and developing
written information

V

VERIFYING: determining the accuracy
or inaccuracy of data

XIII

INDEXING: determining and indicating
categories to which materials may be
assigned

VI

COMMUNICATING: oral means of requesting,
giving, receiving, or discussing
information

XIV

MANIPULATING: performing simple
manual or mechanical operations

VII

ASSISTING: morale building, guiding, and
training-type activities performed by
office workers

XV

COPING: using strategies to deal with situations--positive action, negative action, no action

XVI

COMPILE: (assemble, combine, consolidate) to assemble and put in a logical order

3

PLANNING: mental determining of a course of action

XVII

SORT: (separate) to separate into established categories

4

ORGANIZING: establishing the work environment

XVIII

RANK: (order) to place data in order by degrees according to some selected characteristics

5

ACTUATING: stimulating and maintaining of performance and effecting corrective measures

XIX

SECONDARY ACTIVITIES

6 - 23

OPERATIONS/CALCULATING

CONTROLLING: evaluating work performed and the determination and recommendation of corrective measures based on feedback

XX

ACCUE: (accumulate) to accumulate periodically

6

SECONDARY ACTIVITIES

1 - 5

OPERATIONS/ARRANGING

AVERAGE: to find the arithmetic mean

7

BATCH: to group similar materials for processing

1

BALANCE: to compute the difference between two amounts, usually debits and credits, and arrange or prove that the sum of the two amounts is equal

8

COLLATE: (integrate, merge) to put together in a predetermined order

2

COMPOUND: to add to

9

COMPUTE: to reach a solution by the use of mathematical processes

10

ESTIMATE: (approximate) to determine roughly an amount

18

COUNT: (enumerate) to determine the total number of units involved

11

EXTEND: to multiply two or more factors in order to obtain a total, usually associated with unit cost and price

19

CROSS-BALANCE: to add both vertically and horizontally to arrive at a single total

12

MEASURE: to ascertain the dimensions, capacity, or amount of

20

CROSS-FOOT: to add horizontally

13

PRICE: (cost, mark down, mark up) to establish monetary value

21

DEPRECIATE: (amortize) to lower the amount of

14

PRORATE: to distribute a total amount proportionately on some predetermined basis

22

DETERMINE PERCENTS: (percentage, rate) to express the parts of a whole in terms of hundredths

15

TOTAL: (foot, sum) to obtain the sum of

23

DETERMINE RATIOS: to determine the relation between two similar magnitudes in respect to the number of times the first contains the second

16

SECONDARY ACTIVITIES

24 - 32

OPERATIONS/COLLECTING

DISCOUNT: to make a deduction from

17

BORROW: to get from another with the intent of returning

24

GATHER: (accumulate, amass, assemble)
to bring together from more than one
source

25

SECONDARY ACTIVITIES

33 - 35

OPERATIONS/COMPARING

OBTAIN: (acquire, gain, procure,
secure) to get possession of

26

ASSOCIATE: to bring together in any of
various ways in order to discover or
establish relationships

33

ORDER: (requisition) to issue a
request for

27

DISTINGUISH: (differentiate, discrimin-
ate) to determine distinctions by per-
ceiving and evaluating differences

34

PREVIEW: to make a preliminary survey
for collecting information

28

MATCH: to put together according to
equal or harmonizing attributes

35

RETRIEVE: (reacquire, recover, regain,
repossess) to acquire again

29

SECONDARY ACTIVITIES

36 - 44

OPERATIONS/COMPOSING

SCAN: to glance over in order to
secure pertinent data

30

ANNOTATE: to make critical or
explanatory notes

36

SEARCH: (hunt, investigate, look for,
probe, seek) to look for data

31

DESIGN: (devise, draw, illustrate,
invent, lay out, originate, sketch) to
devise for a specific function

37

SELECT: (choose, discriminate, pick,
screen) to choose from a number of
things available

32

DOCUMENT: (support) to provide factual
support for

38

DRAFT: to make a preliminary or tentative version of

39

CROSS-REFERENCE: to prepare a means for referring to a document by a subject, name, or number other than that under which the document is filed

46

EDIT: (revise, rewrite) to change by deleting or rearranging

40

DECODE: (decipher, translate) to convert from code to ordinary language

47

OUTLINE: to prepare a point by point list of the principal parts or features

41

ENCODE: to transfer one system of communication to another

48

PARAPHRASE: (reword) to give same meaning in a different form by restating

42

LABEL: to place suitable marks or tape to items to identify contents

49

SUMMARIZE: (abridge, abstract, condense, digest, recapitulate) to give a short description of without loss of original meaning

43

SECONDARY ACTIVITIES

50 - 74

OPERATIONS/MANIPULATING

WRITE: to draw up in written form

44

BRUSH: to apply with a stroking action

50

SECONDARY ACTIVITIES

45 - 49

OPERATIONS/INDEXING

CLEAN: (brush, dust, polish, scrub, shine, sweep, tidy, wipe) to rid of dirt or extraneous matter

51

CODE: to indicate by symbols or words the category to which materials have been assigned

45

CUT: (clip, shred, split) to divide into pieces with an edged tool or shredder

52

ERASE: (cross out, eradicate, scratch out) to remove visible marks

53

LOCK: to make secure by means of a lock

61

FASTEN: (affix, attach, bind, cement, glue, paste, pin, staple) to put together

54

NUMBERING: to assign a number to

62

FEED: to move into a machine or opening

55

OPEN: (unfold) to unfold or make an opening in

63

FIX: (patch, piece, touch up) to set in order

56

PACK: (unpack) to put in (or take out of) a protective container

64

FOLD: to lay one part over another

57

PULL: (extract, remove, separate, withdraw) to remove from storage

65

INK: to supply with ink

58

PUNCH: (perforate) to make a hole through

66

LAMINATE: to unite layers of materials

59

SCRAPE: to remove from a surface by repeated strokes of an edged instrument

67

LOAD: (fill) to supply with a full complement of

60

SEAL: to secure against access by closing

68

SHARPEN: to make a keen edge or fine point

69

CONVERT: (transform) to make a major change in

76

SPLICE: to unite by lapping two ends together

70

CORRECT: (debug, rectify, remedy, repair, right) to change in order to set right

77

STAMP: to record with a stamping device

71

DECREASE: (abbreviate, condense, contract, cut, lessen, minimize, reduce, shorten) to make smaller

78

STUFF: to put in

72

INCREASE: (amplify, augment, enlarge, expand, lengthen, maximize, supplement) to make greater

79

THREAD: to place a thread, ribbon, or tape in position for use

73

PERFECT: (polish, refine) to bring to an ideal standard

80

WRAP: (package) to enclose with a protective covering

74

QUALIFY: (limit, restrict) to change from a general to a restricted form

81

SECONDARY ACTIVITIES

75 - 85

OPERATIONS/MODIFYING

RESTORE: (reclaim, reconstruct, renew) to bring back to a former or original state

82

ADAPT: (adjust, alter, change, vary) to change to fit the situation

75

REVISE: (amend, improve, rearrange, revamp, streamline, update) to improve, amend, or update

83

TEMPER: (moderate, soften, tone)
to make less harsh or strict

84

WEED: (clean, clear, screen) to remove
selectively materials from files

91

TRANSPOSE: (invert) to alter the
sequence of

85

SECONDARY ACTIVITIES

92 - 99

SECONDARY ACTIVITIES

86 - 91

OPERATIONS/PURGING

CHART: (diagram, graph, plot) to show
graphically

92

CANCEL: (negate, nullify, rescind,
revoke, void) to destroy the effective-
ness or validity of

86

COPY: (facsimile, keypunch, microfilm,
photograph, reproduce, typewrite, trace)
to make copies of by hand or by the use
of a typewriter or copying machine

93

CONSUME: (deplete, expend, use up)
to use up something

87

DUPLICATE: (print, reproduce) to make
multiple copies of

94

DESTROY: (obliterate) put out of
existence or make ineffective

88

POST: (credit, debit, journalize) to
transfer an item from one record to
another

95

DISCARD: (dispose of, junk, scrap,
throw away) to throw away or reject

89

REGISTER: (book, enter, log) to enter in
a register

96

ELIMINATE: (delete, drop, exclude,
reject, remove) to delete
nonessentials

90

TAPE: to record material on tape

97

TRANSCRIBE: (translate) to make a copy of dictated material 98	SECONDARY ACTIVITIES 105 - 119 OPERATIONS/TRANSMITTING
WRITE: (handprint, handwrite, initial, inscribe, mark, sense, sign, take dictation) to put down by hand on paper without the aid of machines 99	CHARGE OUT: (check out, issue, release) to give out from one's custody, often on loan 105
SECONDARY ACTIVITIES 100 - 104 OPERATIONS/STORING	CIRCULATE: to pass from person to person or place to place 106
DEPOSIT: to place in storage designed for safekeeping 100	DELIVER: (bear, carry, hand over, move, transport) to move from one place to another 107
FILE: to arrange systematically for the purpose of preservation and reference 101	DISPATCH: to send with promptness or speed 108
PROTECT: (guard, maintain, preserve, safeguard, shield) to make safe from injury or loss by any of various means 102	DISPENSE: (mete out) to give out in controlled amounts 109
RESERVE: (hold, keep, retain, set aside) to keep in store for future or special use 103	DISPLAY: (exhibit, post) to put on display, generally in one location, for all to see 110
STOCK: (fill, provide, shelve, supply) to provide with supplies 104	DISTRIBUTE: (disperse, disseminate) to send out to many 111

FORWARD: (pass on) to send to a different person or a different address

112

SECONDARY ACTIVITIES

120 - 124

OPERATIONS/VERIFYING

LEND: (loan) to give for temporary use on the condition that the same or its equivalent be returned

113

AUDIT: to examine officially

120

PUBLICIZE: (circularize) to promote by announcing widely

114

CHECK: to inspect for satisfactory condition

121

REMIT: (refund) to send money for payment

115

PROOFREAD: to read and mark corrections

122

ROUTE: (channel) to prearrange and direct the order of distribution

116

RECONCILE: (account for, adjust, settle) to adjust or account for differences

123

SEND: a general category to be used when none of the others are appropriate

117

VALIDATE: (authenticate, certify, notarize) to determine and establish the genuineness of

124

SUBMIT: to give to another for his consideration

118

SECONDARY ACTIVITIES

125 - 151

INTERACTIONS/COMMUNICATING

SWITCH: (exchange, hunt, transfer) to move from one to another or back and forth

119

AFFIRM: (assert, claim, declare) to declare that something is true

125

ANSWER: (reply, respond, retort)
to respond to

126

ELICIT: to motivate a response by the
use of special techniques

134

CANVASS: (poll, solicit) to determine
or seek information by the taking of
a poll

127

EMPHASIZE: (stress) to give prominence to
by speaking forcefully

135

CONSULT: (confer) to confer with
knowledgeable persons

128

EXPLAIN: (clarify, elucidate, interpret,
rephrase) to make something clear and
understandable

136

DEBATE: (argue, dispute) to discuss
a question by considering opposing
arguments

129

EXPRESS: (voice, utter) (to be used only
when other categories are not applicable)
to give oral expression to

137

DEMAND: (emphasize, order) to ask
forcefully

130

INQUIRE: (ask, query) to ask for
information

138

DESCRIBE: (narrate, recount, relate,
report) to give an account of in an
illustrative manner

131

INVITE: to ask for one's participation
or presence

139

DETAIL: (enumerate, specify) to
give information minutely

132

LISTEN: (attend, hear, heed) to pay
attention to

140

DISCUSS: to talk over

133

NEGOTIATE: to try to reach an agreement

141

PAGE: to summon a person by repeatedly calling his name

142

SUMMARIZE: (recapitulate) to express the main idea in a few words

150

PERSUADE: (coax, convince, induce, sway) to present views in such a way that others will be led to think in a like manner

143

THANK: to express appreciation for

151

QUESTION: (interrogate, pry, quiz) to ask a series of questions to bring information to light

144

SECONDARY ACTIVITIES

152 - 164

INTERACTIONS/ASSISTING

QUOTE: (cite, refer) to present supporting evidence

145

ADVISE: (help, serve, support) to give assistance to a person

152

REPEAT: (reiterate) to say again

146

AID: (help, serve, support) to give assistance to a person

153

REQUEST: to express a need for

147

ALERT: (caution, forewarn, warn) to tell someone of something to be watched for or guarded against

154

REVEAL: (disclose, divulge) to make known previously inaccessible information

148

ENCOURAGE: (assure, cheer, compliment, commend, foster, hearten, inspire, motivate, praise, reassure, support stimulate) to inspire by giving hope and confidence

155

SUGGEST: (advocate, recommend, urge) to offer something for consideration

149

ESCORT: (accompany, conduct, lead) to accompany for the purpose of guiding or as a mark of courtesy

156

INFORM: (appraise, enlighten, notify)
to impart information to make easier or
faster the performance of the work

157

SECONDARY ACTIVITIES

165 - 196

INTERACTIONS/COPING

INSTRUCT: (brief, coach, educate, show,
explain, teach, train, tutor) to teach

158

ACCEPT: (acquiesce, agree, assent, comply,
concur, consent, subscribe, submit) to
agree to

165

INTERCEDE: (interpose, intervene,
mediate, reconcile) to attempt to
reconcile two opposing sides

159

ADAPT: (accommodate, adjust, conform, fit,
reconcile) to adjust to prevailing stan-
dards or conditions

166

ORIENT: (acquaint, direct, familiar-
ize) to acquaint an individual with
the office environment

160

ADMIT: (acknowledge, confess) to
acknowledge facts or situations

167

PLACATE: (allay, appease, assuage,
calm, ease, mollify, pacify, quiet,
relieve, soothe) to make concessions
to calm anger or hostility

161

APOLOGIZE: (atone, repent) to admit error
and express regret

168

REMIND: (refresh) to call to
another's attention in order to
refresh his memory

162

AVOID: (elude, evade, shun) to depart or
stay away from

169

SHOW: (demonstrate, illustrate) to
point out in order to clarify

163

BLUFF: (camouflage, deceive, disguise,
feign, pretend) to handle a situation
through the use of pretense

170

WELCOME: (greet) to receive a person
hospitably

164

BOAST: (brag) to speak with excessive
pride

171

CHARM: (allure, attract, captivate, delight, enchant, fascinate, etc.) to draw to oneself by personal appeal

172

EMPATHIZE: to project oneself into the experiences and feelings of another

180

CIRCUMVENT: to work around a problem by using ingenuity or strategy

173

ENDURE: (bear, suffer, tolerate, withstand) to tolerate trying circumstances

181

COAX: (cajole, persuade, urge, wheedle) to influence by gentleness, tactfulness, and sometimes artfulness

174

EXCEL: (exceed, outdo, outshine, surpass) to advance or distinguish oneself through excellence

182

COMPENSATE: (counterbalance, offset) to make up for

175

FORGIVE: (excuse, pardon) to cease to feel resentment against

183

COMPETE: (contend, oppose, rival, vie) to vie in order to gain a desired objective

176

HINT: (insinuate, intimate) to infer rather than to say explicitly

184

COMPROMISE: to come to agreement by mutual concession

177

IMPROVISE: to create on the spur of the moment

185

CO-OPERATE: (collaborate) to work with others for mutual benefit

178

INNOVATE: to introduce as new

186

DISREGARD: (ignore, omit, overlook, slight) to pay little or no attention to

179

OBEY: (comply, follow, heed) to follow directions

187

PERSEVERE: (persist) to continue in spite of opposition or discouragement

188

YIELD: (concede, defer, relent, submit) to submit to another's ideas or wishes

196

RATIONALIZE: to provide reasonable, plausible, justification for one's actions by distorting the truth, either consciously or unconsciously

189

SECONDARY ACTIVITIES

197 - 201

MANAGEMENT/PLANNING

REFRAIN: (check, constrain, curb, repress, restrain, subdue) to keep oneself under control by holding back

190

ANALYZE: to determine the nature and relationship of parts

197

REFUSE: (decline, deny, reject) to not comply

191

BUDGET: to provide for the use of in detail

198

RESPECT: (esteem, honor, reverse, etc.) to consider worthy of high regard

192

CLASSIFY: (categorize, group, partition) to create categories in order to group ideas, people, or activities into sets according to common elements

199

SOCIALIZE: (participate) to participate actively in a group

193

DESIGN: (create, devise, originate) to formulate a plan or pattern to accomplish a desired objective

200

VERBALIZE: to release one's feelings or overcome situations by talking

194

FORECAST: (anticipate, predict, project, prognosticate) to attempt to indicate future conditions

201

WITHDRAW: (alienate, clam up, isolate, retire) to remove oneself from participation

195

SECONDARY ACTIVITIES 202 - 213 MANAGEMENT/ORGANIZING	ELIMINATE: (destroy, remove) to get rid of 209
ALLOCATE: (allot, apportion, divide, prorate) to divide in amounts suitable for efficient performance 202	EMPLOY: (hire, recruit) to select personnel for office positions 210
APPOINT: (assign, commission, designate, name) to name an employee to fill a specific position or perform a specific task 203	EQUIP: (furnish, outfit) to provide with the necessary materials and machines to perform a designated function 211
AUTOMATE: (automatize) to establish operation by an electronic device to replace mechanical or human effort 204	SCHEDULE: (assign, "PERT" (program Evaluation Review Technique) program) to place in a time sequence 212
CENTRALIZE: to place in one location or one person or group 205	SYSTEMATIZE: (arrange, order, routinize) to arrange in an orderly or methodical manner 213
DECENTRALIZE: to disperse or distribute from one location or person to several 206	SECONDARY ACTIVITIES 214 - 221 MANAGEMENT/ACTUATING
DELEGATE: (empower) to entrust authority to another 207	ADJUST: (adapt, modify, rearrange) to change to meet a new situation 214
DISMISS: (discharge, free, lay off, release) to remove from employment or a specific activity 208	ENFORCE: (compel, drive, impel, impose) to require adherence to 215

EXPEDITE: (accelerate, hasten, rush)
to give special attention to in order to
process or move quickly

216

DISAPPROVE: (condemn, reject, veto) to
indicate dissatisfaction

223

IMPLEMENT: (accomplish, effect, fulfill)
to use measures that will ensure the
carrying out of

217

EVALUATE: (analyze, appraise, assess,
estimate, judge, rate, value) to determine
the value of

224

INITIATE: (establish, inaugurate,
launch, institute, introduce) to set
going

218

LIMIT: (circumscribe, curtail, restrict)
to establish boundaries

225

MOTIVATE: (induce, inspire, prompt,
spur) to stimulate to action

219

PERMIT: (allow, authorize, let) to grant
permission or allow something to be done

226

PERFORM: (carry out, execute) to do
what is provided for or required

220

PREVENT: (avert, forestall, preclude,
stop) to keep from happening

227

SUBSTITUTE: (replace) to put in the
place of another

221

RECOMMEND: (advocate, prescribe, suggest)
to declare in favor of

228

SECONDARY ACTIVITIES

222 - 230

MANAGEMENT/CONTROLLING

REGULATE: (direct, govern, manage, order,
regularize) to control or direct by some
designated principle or method; to adjust
to some standard or requirement

229

APPROVE: (authorize, confirm,
enforce, OK, ratify, sanction) to
give favorable or positive support
to

222

SUPERVISE: (direct, oversee) to
oversee

230

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